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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,286	02/06/2004	Kerwin D. Dobbs	UC0405USCIP	8498
23906 7590 10/12/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER YAMNITZKY, MARIE ROSE	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 10/12/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary	Application No. 10/774,286	Applicant(s) DOBBS ET AL.	
	Examiner Marie R. Yamnitzky	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,12-14,17,18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 18 is/are allowed.
- 6) ☒ Claim(s) 1,2,12-14,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's amendment filed on May 29, 2007, which amends the specification and claims 1, 17, 18, 20 and 21, and cancels claims 9, 10 and 19, has been entered.

Claims 1, 2, 12-14, 17, 18, 20 and 21 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. The objection to the amendment filed December 15, 2006 as introducing new matter into the disclosure is withdrawn in view of the decision granting the petition to accept an unintentionally delayed claim for the benefit of priority (decision mailed September 06, 2007).

3. The rejection of claims 20 and 21 under 35 U.S.C. 112, 2nd paragraph, as set forth in the Office action mailed February 27, 2007 is overcome by claim amendment.

The prior art rejection of claim 10 under 35 U.S.C. 102(e) as set forth in the February 27th action is rendered moot by claim cancellation.

The prior art rejections of claim 19 under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) as set forth in the February 27th action are rendered moot by claim cancellation.

The prior art rejections of claims 1, 2 and 12-14 under 35 U.S.C. 102(b) and 102(e) as set forth in the February 27th action are overcome by claim amendment which incorporates the limitations of prior claim 9 into claim 1. Separately, the rejection of claims 1, 2 and 12-14 under 35 U.S.C. 102(b) as anticipated by Igarashi et al. (US 2002/0134984 A1) is also overcome by the deletion of $N(R^4)_2$ as a possibility for R^1 in claim 1.

The rejection of claim 9 under 35 U.S.C. 103(a) as unpatentable over Ise et al. (EP 1 175 128 A2) in view of Igarashi et al. (US 2001/0019782 A1) is rendered moot by claim cancellation. While the limitations of claim 9 have been incorporated into claim 1, this rejection is not applicable to present claim 1 in light of the decision mailed September 06, 2007 granting the petition to accept an unintentionally delayed claim for the benefit of priority, given the deletion of $N(R^4)_2$ as a possibility for R^1 in claim 1, and in light of the disclosures of the priority applications which predate the publication date of the Ise et al. document.

The rejection of claims 17 and 18 under 35 U.S.C. 103(a) as set forth in the February 27th action is overcome by claim amendment.

4. Claims 1, 2, 12-14, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamatani et al. (US 6,953,628 B2).

See the whole patent. In particular, see column 5, line 18-c. 6, l. 25, c. 11, l. 24-c. 13, l. 50, Nos. 475-486, 488, 490-494, 496-502, 504-510, 512-518, 520-526, 528-534, 536-542, 544-550, 552-558, 560-566 and 568-574 in Tables 1-8, 1-9 and 1-10 (c. 29-32) and Nos. 612 and 616 in Table 1-11 (c. 33-34).

Kamatani's compound Nos. 612 and 616 are iridium compounds having two substituted phenylpyridine ligands within the scope of the two substituted phenylpyridine ligands required by the Formula (I) compound as defined in present claim 1. The third ligand of compound Nos. 612 and 616 is an iminocarboxylate ligand rather than a β -enolate ligand having formula III as required by present claim 1 and dependents.

Kamatani's compounds Nos. 475-486, 488, 490-494, 496-502, 504-510, 512-518, 520-526, 528-534, 536-542, 544-550, 552-558, 560-566 and 568-574 are iridium compounds having a β -enolate ligand having formula III as required by present claim 1 and dependents, and two substituted or unsubstituted phenylpyridine ligands. The phenylpyridine ligands of these prior art compounds are outside the scope of the two substituted phenylpyridine ligands required by the Formula (I) compound as defined in claim 1, but some are very similar in structure. In particular, the two substituted phenylpyridine ligands in Kamatani's compound Nos. 489, 520-526, 552-558 and 568-574, differ from the two substituted phenylpyridine ligands in Formula (I) of claim 1 only in that the phenylpyridine ligands in these compounds are lacking one of the two required F. Kamatani's compound Nos. 489, 520-526, 552-558 and 568-574 differ from the compounds having Formula (I) as defined in claim 1 and further defined in claim 2 only in that one of the two required F on the phenylpyridine ligands is lacking. Of these compounds, Nos. 523 and 555 differ from the compounds having Formula (I) as further defined in claims 20 and 21 only in that one of the two required F on the phenylpyridine ligands is lacking.

Kamatani et al. do not disclose a specific example of a compound of formula I as defined in present claim 1 and dependents, but such compounds are within the scope of Kamatani's

disclosure and would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention given Kamatani's disclosure.

Kamatani et al. teach that β -enolate ligands such as those of formula III in present claim 1 can be used in place of an iminocarboxylate ligand (e.g. see formulae 4 and 5 in c. 5-6, which represent iminocarboxylate and β -enolate ligands, respectively). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to make compounds similar to compounds 612 and 616, but having a β -enolate ligand as in compounds Nos. 475-486, 488, 490-494, 496-502, 504-510, 512-518, 520-526, 528-534, 536-542, 544-550, 552-558, 560-566 and 568-574 in place of the iminocarboxylate ligand, with the expectation that compounds similar in structure and comprising ligands disclosed by Kamatani et al. would be suitable for the purposes of the prior art. For example, given Kamatani's formulae 4 and 5 in c. 5-6, and given specific compound examples such as compound Nos. 611 and 552-558, which differ from each other only in that No. 611 has an iminocarboxylate ligand whereas Nos. 552-558 have a β -enolate ligand of present formula III, one of ordinary skill in the art at the time of the invention would have reasonably expected that the iminocarboxylate ligand of No. 612 or No. 616 could be replaced with a β -enolate ligand such as in any of Nos. 552-558 to provide additional specific compounds that would be suitable for the purposes of the prior art.

Further, given that Kamatani et al. provide specific examples of substituted phenylpyridine ligands in which the phenyl ring is substituted with two F at the positions shown in present Formula (I), it would have been *prima facie* obvious to one of ordinary skill in the art

at the time of the invention to substitute F for H at A-R1 in Kamatani's compound Nos. 489, 520-526, 552-558 and 568-574, thus providing iridium compounds of present Formula (I). One of ordinary skill in the art at the time of the invention would have reasonably expected that F could be substituted at the A-R1 position of the phenylpyridine ligands in compound Nos. 489, 520-526, 552-558 and 568-574 to provide additional specific compounds that would be suitable for the purposes of the prior art.

5. Applicant's arguments filed May 29, 2007 have been fully considered but they are not persuasive with respect to the patentability of claim 1 and dependents over the '628 patent to Kamatani et al.

Applicant argues that there are virtually infinite possible combinations of ligands per the prior art reference, and that the prior Office action concludes that it would have been obvious to combine the ancillary ligand of compound 475 with compound 612 or compound 616 without pointing to anything in the reference that teaches or suggests such a combination from the many combinations that would be possible.

The examiner previously referenced compound 475 as an example showing Kamatani's disclosure of the heptafluorinated ligand named in claim 21, which is a specific example of a ligand of present Formula (III). Kamatani et al. disclose many other examples of iridium compounds having a ligand of present Formula (III) and two phenylpyridine ligands, and those compounds have also been referenced in the rejection as set forth in this action. A more detailed

explanation is provided in the rejection with respect to prior art compounds that are particularly close in chemical structure to the compounds of present Formula (I).

While Kamatani's disclosure encompasses numerous iridium compounds, including compounds that are outside the scope of the present claims, Kamatani provides specific examples of iridium compounds that are similar in chemical structure to the compounds of Formula (I) as defined in present claim 1. Absent a showing of superior/unexpected results, the examiner maintains the position that an organic electronic device comprising an iridium compound having two substituted phenylpyridine ligands as shown in Formula (I) and a β -enolate ligand of Formula (III) would have been obvious to one of ordinary skill in the art at the time of the invention given Kamatani's disclosure.

In traversing the rejection under 35 U.S.C. 103(a) based on the '628 patent to Kamatani et al., applicant did not argue that this reference is not available as prior art. The examiner notes for the record that the disclosures of the priority applications which predate the effective U.S. filing date of the '628 patent do not provide full support for a compound of Formula (I) as defined in present claim 1. In particular, the scope of ligands of Formula (III) is not supported by the earlier priority applications. Accordingly, the '628 patent is available as prior art.

6. Claims 17 and 18 are allowed.

The prior art does not disclose or suggest the compound of Formula X or Formula XI as in claim 17, and does not disclose or suggest an electronic device comprising a blue-luminescing compound of Formula XIV or Formula XV as in claim 18.

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7. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY

October 03, 2007



**MARIE YAMNITZKY
PRIMARY EXAMINER**

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